In accordance with 37 CFR 1.175(b)(1), a supplemental reissue oath/declaration under 37 CFR 1.175(b)(1) must be received before this reissue application can be allowed.

Claims 1-7, 9-36. 38-44 are rejected as being based upon a defective reissue under 35 U.S.C. 251. See 37 CFR 1.175. The nature of the defect is set forth above.

Receipt of an appropriate supplemental oath/declaration under 37 CFR 1.175(b)(1) will overcome this rejection under 35 U.S.C. 251. An example of acceptable language to be used in the supplemental oath/declaration is as follows:

> "Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant."

See MPEP § 1414.01.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 18-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (6,028,608) in view of Cook et al (5,025,400).

As per claim 18, Jenkins teaches the claimed "memory for a computer system including a processor", the memory comprising:

"code that directs the processor to determine a first plurality of sampling locations associated with at least a portion of a first representation of an object and to determine a second plurality of sampling locations associated with at least a portion of the second representation of the object" (Jenkins, the object is provided in a database with different level-of-details; column 35, lines 24-36);

"code that directs the processor to render locations in the portion of the first representation of the object associated with the first plurality of sampling locations to obtain first sampled values; code that directs the processor to render locations in the portion of the second representation of the object associated with the second plurality of sampling locations to obtain second sampled values" (Jenkins, column 26, lines 25-44; column 35, lines 18-30);

"code that directs the processor to combine the first sampled values for the first plurality of sampling locations and the second sampled values for the second plurality of sampling locations to form at least one sampled value for the portion of the object" (Jenkins, column 35, lines 39-43); and

"code that directs the processor to record the at least one sampled value as part of an image" (Jenkins, column 35, lines 15-24; column 36, lines 25-55); and

"wherein the first plurality of sampling locations are not identical to the second plurality of sampling locations; wherein the codes reside on a tangible media" (Jenkins, column 35, lines 15-24; column 36, lines 25-55). It is noted that Jenkins does not explicitly teach that the sample locations are "pseudo-randomly determined" as claimed.

However, Cooks teaches that the “sampling within an area of a pixel” (or sub-sampling) and “said sample locations are pseudo-randomly distributed within said area of said pixel” are well known in the art (Cooks, column 4, lines 47-50; column 5, lines 23-27). Thus, it would have been obvious in view of the sub-sampling teaching of Cooks to configure Jenkins’ samples of object in a database with different level-of-details to sampling within an area of a pixels or sub-sampling to determine the final result of the pixel value. The purpose of “sampling within a pixel area” or sub-sampling is improving the gray-level representation of a pixel or the accuracy of pixel representation. The increasing of accuracy in pixel representation is just a trade-off between the quality of the displayed image and the processing time.

RESPONSE TO APPLICANT’S ARGUMENTS:

Applicant’s arguments filed March 24, 2009 have been fully considered but they are not deemed to be persuasive.

During the Interview on March 10, 2010, Applicant, Applicant’s representatives and Examiner agreed that the allowable feature of the claimed invention is “each of different levels of detail for representing the object is pseudorandomly associated with the one of said sample locations.” However, in this claim 18, the pseudo-randomness is associated with the sampling locations which is taught by Cooks’ pseudo-sampling (Cooks, column 4, lines 47-50; column 5, lines 23-27).

Claim 19 adds into claim 18 “stochastically determine the first plurality of sampling location” (Cooks, column 4, lines 47-50; column 5, lines 23-27).

Claim 20 adds into claim 18 “different geometric characteristics selected from the group: geometric primitives, geometric topology, displacement maps” (Jenkins, different types of polygons; column 59, lines 24-25).

Claim 21 adds into claim 20 “the representations comprise different level of details” (Jerkins, Level-of-details in descriptions of the primitive polygons represents the displayed object; column 22, lines 45-65).

Claim 22 adds into claim 18 “different shading paradigms selected from the group: texture maps, colors, materials, surface maps, displacement maps” (Jenkins, primitive descriptions such as color, size, … column 61, lines 58-60).

Claim 23 adds into claim 18 “code that directs the processor to determine a plurality of sampling locations associated with a portion of an object; and code that directs the processor to determine the first plurality of sampling locations and the second plurality of sampling locations from the plurality of sampling locations” (Jerkins, Level-of-details in descriptions of the primitive polygons represents the displayed object; column 22, lines 45-65).

Claim 24 adds into claim 18 “code that directs the processor to determine a weighted distribution for the first plurality of sampling locations and the second plurality of sampling locations from the plurality of sampling locations in response to a factor selected from the group: a size of the portion of the object in a scene, a viewing angle with respect to the portion of the object” (Jenkins, column 35, lines 39-43).

Claim 25 adds into claim 18 “code that directs the processor to determine a number of sampling locations for the first plurality of sampling locations from the plurality of sampling locations in response to importance of the object in a scene” (Jenkins, column 26, lines 25-44; column 35, lines 18-43).

Claim 26 adds into claim 18 “code that directs the processor to determine a number of sampling locations for the first plurality of sampling locations from the plurality of sampling locations in response to a rendering performance cost for rendering the locations in the portion of the first representation of the object associated with the first plurality of sampling locations” (Cooks, column 5, lines 5-27; column 7, lines 17-31).

Claim 27 adds into claim 22 “the first representation of the object and the second representation of the object are associated with differences selected from the group:

chronological times, camera characteristics, object orientations" (Jenkins, the object is provided in a database with different level-of-details; column 35, lines 24-36).

Claims 28-39 claim a memory and an apparatus respectively based on the method of claims 18-27; therefore, they are rejected under the same reason.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHU NGUYEN whose telephone number is (571)272-7645. The examiner can normally be reached on M-F/8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272 7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Phu K. Nguyen/
Primary Examiner, Art Unit 2628